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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 09/864,778 | 05/24/2001 | Seiji Hatano | F-6998 | 4297 |
| 7590 03/25/2004 JORDAN AND HAMBURG LLP 122 East 42nd Street New York, NY 10168 | | | EXAMINER CHOI, LING SIU | |
| | | | ART UNIT 1713 | PAPER NUMBER |
| DATE MAILED: 03/25/2004 | | | | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,778

Applicant(s)

HATANO ET AL.

Examiner

Ling-Siu Choi

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

1. Claims 1-5 are now pending, which are drawn to a rubber composition.

Claim Objections

2. Claims 1-5 are objected to because of the following informalities: (a) claim 1, lines 1-2, "for adhering to steel cords excellent in adhesion to steel cords wherein" is suggested to be changed to --for adhering to steel cords, wherein-- and (b) claim 1, line 12, "at least one" is suggested to be changed to --at least one resin--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US 5,226,987) in view of Uhara et al. (JP 63221140).

The present invention relates to a rubber composition for adhering to steel cords, comprising

| | |
|-------------|---|
| rubber | natural rubber and /or diene synthetic rubber |
| component A | a mixture of a nickel compound and a molybdenum compound or a compound containing nickel and molybdenum |
| component B | hexamethylenetetramine or melamine derivative |
| | at least one resin [phenol resins, resorcin, resorcin derivatives, and cresol resins] |

(summary of claim 1)

Matsumoto et al. disclose a rubber composition for a steel cord reinforced belt, comprising (A) rubber (natural rubber and isoprene rubber), (B) reinforcing agents - resorcin or a resorcin derivative, carbon black, and silica, and (C) methylene donor - hexamethylene tetramine or a melamine derivative (abstract; claim 1). Matsumoto et al. further disclose that "rubber reinforcing layer may be incorporated, in addition to the above-mentioned components, with **any known vulcanizing agent, vulcanizing accelerator, accelerator activator....**" (col. 4, lines 1-5).

The difference between the present claims and the disclosure of Matsumoto et al. is the requirement of a mixture of nickel compound and molybdenum compound used as accelerator.

Uhara et al. disclose a rubber-steel cord adhesion accelerator obtained by the contact of an organic molybdenum compound and an organic nickel compound to improve the adhesion strength (abstract). In light of such benefit, it would have been obvious to one of ordinary skill

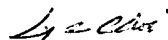
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in the art to use the mixture of organic molybdenum compound and organic nickel compound in the disclosure of Matsumoto et al. and thereby obtain the present invention.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-114.



Ling -Siu Choi

March 21, 2004